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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/809,400	03/26/2004	Jang-Kun Song	6192.0363.US	7538
23345	7590	12/14/2005	EXAMINER	
MCGUIREWOODS, LLP 1750 TYSONS BLVD SUITE 1800 MCLEAN, VA 22102			NGUYEN, THANH NHAN P	
			ART UNIT	PAPER NUMBER
			2871	

DATE MAILED: 12/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/809,400

Applicant(s)

SONG, JANG-KUN

Examiner

(Nancy) Thanh-Nhan P. Nguyen

Art Unit

2871

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: NPL document

DETAILED ACTION

Claim Objections

Claim 6 is objected to because of the following informalities: Claim 6 currently read as, "... and first and second diodes disposed on the first and the second insulators..." It appears it should have read as, "... and first and second output electrodes disposed on the first and the second insulators..." and have been examined accordingly.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2 & 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maeda et al JP 0416533A in view of Sekiguchi U.S. Patent No. 5,893,621.

Regarding claim 1, Maeda et al discloses a liquid crystal display comprising: a pair of first (11a) and second signal lines (11b) transmitting select pulses having opposite polarity; a third signal line (12) transmitting data voltages; the bottom electrode (16); a plurality of diodes connected between the first and the second signal lines and providing at least two different resistances, which are internal resistance and contact resistance, [see figs. 1a, 1b & 3a].

Maeda et al lacks disclosure of the bottom electrode comprising first and second field generating electrodes separated from each other with a gap; and therefore lacks disclosure of a plurality of diodes connected between the first and second field generating electrodes.

Sekiguchi discloses a plurality of diodes connected between the first and second field generating electrodes, [see fig. 1], for the benefit of preventing deterioration in the quality of liquid crystal and the contrast of display, [see abstract]. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to have a plurality of diodes connected between the first and second field generating electrodes for the benefit of preventing deterioration in the quality of liquid crystal and the contrast of display.

Regarding claim 2, Maeda et al discloses wherein the diodes comprises MIM diodes, [see fig. 1b].

Claim 4 is met the discussion regarding claim 1 rejection above.

Claim 5 is met the discussion regarding claim 2 rejection above.

Regarding claim 6, Maeda et al discloses wherein the MIM diodes includes first and second input electrodes connected to the first and the second signal lines, which are protrusions from the first and second signal lines, respectively, first (15a) and second insulators (15c) disposed on the first and the second input electrodes, respectively, and first (17a) and second output electrodes (17c) disposed on the first and the second insulators, respectively, and connected to bottom electrode (16).

Maeda et al lacks disclosure of the bottom electrode comprising first and second field generating electrodes separated from each other with a gap; and therefore lacks disclosure of the first and second output electrodes respectively connected to the first and the second bottom electrodes.

Sekiguchi discloses the output electrodes connected to the first and the second bottom electrodes, [see fig. 1], for the benefit of preventing deterioration in the quality of liquid crystal and the contrast of display, [see abstract]. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to have the output electrodes connected to the first and the second bottom electrodes for the benefit of preventing deterioration in the quality of liquid crystal and the contrast of display.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maeda et al in view of Sekiguchi as discussed above, and further in view of Choo et al U.S. Patent No. 6,914,641.

Regarding claim 3, Maeda et al lacks disclosure of wherein the third signal line has at least one cutout or protrusion.

Choo et al discloses the third signal line has at least one cutout or protrusion for the benefit of improving viewing angle in the display, [see col. 12, lines 31-35]. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to have the third signal line has at least one cutout or protrusion for the benefit of improving viewing angle in the display.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to (Nancy) Thanh-Nhan P. Nguyen whose telephone number is 571-272-1673. The examiner can normally be reached on M-F/9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on 571-272-2293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

(Nancy) Thanh-Nhan P Nguyen
Examiner
Art Unit 2871
-- December 2, 2005 --

TN


ANDREW SCHECHTER
PRIMARY EXAMINER